

WEEKLY PROGRESS REPORT
OCTOBER 31 – NOVEMBER 6, 2005

REMOVAL ACTION
NW NATURAL “GASCO” SITE

Prepared for Submittal to
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Prepared by
Anchor Environmental, L.L.C.
6650 SW Redwood Lane Suite 110
Portland, Oregon 97224

On behalf of
NW Natural
220 NW Second Avenue
Portland, Oregon 97209

November 8, 2005

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1 INTRODUCTION

This weekly progress report is a requirement of the U.S. Environmental Protection Agency (EPA) approved Removal Action Project Plan (RAPP) and Section II.5 of the EPA Statement of Work (SOW) for the removal action at the "Gasco" site (Site). The RAPP was prepared to comply with requirements described in the EPA Administrative Order on Consent (Order) for the Site. Consistent with the schedule submitted to EPA (Appendix I of the RAPP), the construction contractor (Sevenson Environmental Services [SES]) initiated construction activities at the Site on August 22, 2005 following the pre-construction meeting. The remainder of this progress report documents the removal action activities that were conducted during the week of October 31 through November 6, 2005.

2 CONSTRUCTION ACTIVITIES

The following section describes the construction activities conducted at the Site from October 31, 2005 through November 6, 2005.

2.1 Site Construction Activities

2.1.1 Construction Activities

The following activities were completed during the week:

- On October 31, a final independent bathymetry survey of the capping area was conducted by Blue Water Engineering.
- The final bathymetry survey was presented to EPA for approval on October 31.
- Final approval of the cap placement was given by EPA on November 1.
- The remaining capping equipment was moved off site by Hickey Marine on November 1.
- No further in-water work was conducted during the week.
- SES continued demobilization of its land-based operations from November 2 through November 4.

2.1.2 Waste Transportation and Off-loading

- The decontamination of haul barge #7 (CHETCO) and the transfer barge (B47) was completed on October 31 and November 1. The barges were returned to their home port in Vancouver, Washington on November 2.
- Off-loading of haul barge #8 (B10) was begun on November 2.

3 MONITORING ACTIVITIES

3.1 Cap Placement and Dredge Material Offload Monitoring

In accordance with Appendix D (i.e., Construction Water Sediment Monitoring Plan [WSMP]) of the RAPP, water quality monitoring for field parameters (turbidity, temperature, dissolved oxygen, pH, and visual monitoring for sheens) occurred during offloading and barge decontamination operations at the Transfer Facility in the Port of Morrow. Cap placement activities were completed on October 29, 2005 and final approval of the cap placement was given by EPA on November 1, 2005.

During offloading and barge decontamination operations at the Transfer Facility, field parameters were monitored every four hours at one upcurrent station 300 feet from the barge and three downcurrent stations 150 feet from the barge. At all locations, samples were collected at three depths—one foot below the surface, mid-depth, and one foot above the bottom.

The field parameter results are summarized for the Transfer Facility in Table 1 and compared to the triggers (from Table E-1 of the Removal Action Environmental Protection Plan [RAEPP]). No exceedances of the Table E-1 triggers were identified for any of the field parameters for this monitoring period.

3.2 Cap Monitoring – Laboratory Parameter Results

The requirement for this activity ended with the completion of cap placement on October 29, 2005.

3.3 Transfer Barge Dewater Monitoring – Laboratory Parameter Results

The requirement for this activity ended with the completion of dredging on October 19, 2005.

3.4 Dredge Monitoring – Silt Curtain-Mudline Interface

Removal of the silt curtain began on October 22, 2005; therefore, no samples were collected at the silt curtain mudline interface during this reporting period.

3.5 Post-Dredge Surface Sediment Characterization

Surface sediment samples were collected as described in Appendix D of the RAPP immediately following the completion of sediment removal (as approved by EPA) and prior to cap placement on October 19, 2005. Samples were collected from 15 EPA-approved sampling stations within the pilot cap and fringing cover areas. The collected samples were submitted to the laboratory for analysis of physical and chemical parameters including TOC, TS, grain size, BTEX, PAHs (i.e., anthracene, benzo(a)anthracene, benzo(a)pyrene, dibenzofuran, fluoranthene, fluorene, naphthalene, and phenanthrene), TPH, cyanide, and total metals (i.e., arsenic, chromium, copper, nickel, lead, and zinc). These results will be used to determine the baseline conditions (i.e., Year 0) in the removal action area prior to cap placement and may be useful for later comparison to longer-term cap monitoring results. To monitor the quality of the decontamination and homogenization procedures, a rinsate blank and homogenization duplicate, respectively, were collected and will be analyzed for the identical list identified above.

Results from the surface sediment characterization are not available at this time.

3.6 Fish Casualties

No fish casualties were identified during this reporting period.

4 PROPOSED WORK FOR WEEK OF NOVEMBER 7, 2005

The following activities are proposed for the week beginning November 7, 2005:

- SES will continue to demobilize its land-based operations at the project site.
- SES will continue the off-loading of haul barge #8 (B10) at the Port of Morrow.
- SES will begin decontamination of haul barge #8 (B10) at the Port of Morrow.
- Anchor staff will continue off-loading oversight and water quality monitoring at the Port of Morrow until over-water activities are completed.
- SES will return haul barge #8 (B10) to its home port in Vancouver, WA.
- SES will begin dismantling of the transfer station at the Port of Morrow facility.

TABLES

Table 1
Water Quality Field Parameters Monitoring Results Compared to Triggers—Transfer Facility
October 31 through November 6, 2005

Station ID	Date	Time	Latitude (dd) ¹	Longitude (dd)	Depth (ft)	DO (mg/L)	DO Triggers ²		Temp (deg C)	Temperature Triggers ²		Turbidity (NTU)	Turbidity Triggers ²		pH Triggers ²			
							DO Triggers ²			Temperature Triggers ²			Turbidity Triggers ²		pH Triggers ²			
							Event Specific Background	Pre-construction Background		Event Specific Background	Pre-construction Background		Event Specific Background	Pre-construction Background	Event Specific Background	Pre-construction Background		
TF-WCU	11/2/2005	1155	45.85347	119.67043	1	9.49	NA	NA	14.03	NA	NA	1.45	NA	NA	7.84	NA	NA	
TF-WCU	11/2/2005	1155	45.85347	119.67043	7	9.45	NA	NA	14.04	NA	NA	1.64	NA	NA	7.86	NA	NA	
TF-WCU	11/2/2005	1155	45.85347	119.67043	13	9.47	NA	NA	14.05	NA	NA	1.55	NA	NA	7.90	NA	NA	
TF-WCD1	11/2/2005	1130	45.85352	119.67284	1	9.83	<6.5	<6.5	14.13	14.33	21.78	1.88	4.45	6.33	7.74	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD1	11/2/2005	1130	45.85352	119.67284	7.5	9.37	<6.5	<6.5	14.11	14.34	21.48	1.34	4.64	6.58	7.84	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD1	11/2/2005	1130	45.85352	119.67284	14	9.46	<6.5	<6.5	14.11	14.35	21.42	1.50	4.55	6.64	7.88	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/2/2005	1138	45.85359	119.67266	1	9.32	<6.5	<6.5	14.16	14.33	21.78	1.60	4.45	6.33	7.83	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/2/2005	1138	45.85359	119.67266	13	9.30	<6.5	<6.5	14.12	14.34	21.48	1.75	4.64	6.58	7.90	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/2/2005	1138	45.85359	119.67266	25	9.22	<6.5	<6.5	14.11	14.35	21.42	1.55	4.55	6.64	7.94	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD3	11/2/2005	1146	45.85361	119.67239	1	9.38	<6.5	<6.5	14.16	14.33	21.78	1.41	4.45	6.33	7.84	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD3	11/2/2005	1146	45.85361	119.67239	13.5	9.30	<6.5	<6.5	14.12	14.34	21.48	1.37	4.64	6.58	7.91	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD3	11/2/2005	1146	45.85361	119.67239	26	9.32	<6.5	<6.5	14.12	14.35	21.42	1.09	4.55	6.64	7.93	<6.5 or >8.5	<6.5 or >8.5	
TF-WCU	11/2/2005	1558	45.85347	119.67043	1	9.20	NA	NA	14.19	NA	NA	1.85	NA	NA	7.84	NA	NA	
TF-WCU	11/2/2005	1558	45.85347	119.67043	5.5	9.32	NA	NA	14.17	NA	NA	1.16	NA	NA	7.87	NA	NA	
TF-WCU	11/2/2005	1558	45.85347	119.67043	10.5	9.26	NA	NA	14.18	NA	NA	1.36	NA	NA	7.92	NA	NA	
TF-WCD1	11/2/2005	1530	45.85352	119.67284	1	9.17	<6.5	<6.5	14.17	14.49	21.78	1.88	4.85	6.33	7.84	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD1	11/2/2005	1530	45.85352	119.67284	9	9.04	<6.5	<6.5	14.19	14.47	21.48	1.77	4.16	6.58	7.90	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD1	11/2/2005	1530	45.85352	119.67284	17	9.19	<6.5	<6.5	14.20	14.48	21.42	1.39	4.36	6.64	7.91	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/2/2005	1540	45.85359	119.67266	1	9.18	<6.5	<6.5	14.17	14.49	21.78	1.61	4.85	6.33	7.85	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/2/2005	1540	45.85359	119.67266	12.5	9.21	<6.5	<6.5	14.19	14.47	21.48	1.72	4.16	6.58	7.90	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/2/2005	1540	45.85359	119.67266	24.5	9.19	<6.5	<6.5	14.20	14.48	21.42	1.51	4.36	6.64	7.92	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD3	11/2/2005	1547	45.85361	119.67239	1	9.22	<6.5	<6.5	14.18	14.49	21.78	1.38	4.85	6.33	7.84	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD3	11/2/2005	1547	45.85361	119.67239	13	9.26	<6.5	<6.5	14.19	14.47	21.48	1.22	4.16	6.58	7.93	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD3	11/2/2005	1547	45.85361	119.67239	25.5	9.14	<6.5	<6.5	14.20	14.48	21.42	1.48	4.36	6.64	7.92	<6.5 or >8.5	<6.5 or >8.5	
TF-WCU	11/3/2005	827	45.85347	119.67043	1	9.34	NA	NA	13.80	NA	NA	1.38	NA	NA	7.89	NA	NA	
TF-WCU	11/3/2005	827	45.85347	119.67043	7	9.31	NA	NA	13.82	NA	NA	1.90	NA	NA	7.90	NA	NA	
TF-WCU	11/3/2005	827	45.85347	119.67043	13.5	9.30	NA	NA	13.67	NA	NA	1.54	NA	NA	7.97	NA	NA	
TF-WCD1	11/3/2005	803	45.85352	119.67284	1	9.31	<6.5	<6.5	13.80	14.10	21.78	1.68	4.38	6.33	7.73	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD1	11/3/2005	803	45.85352	119.67284	7	9.23	<6.5	<6.5	13.83	14.12	21.48	1.42	4.90	6.58	7.85	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD1	11/3/2005	803	45.85352	119.67284	13	9.27	<6.5	<6.5	13.83	13.97	21.42	1.58	4.54	6.64	7.91	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/3/2005	813	45.85359	119.67266	1	9.37	<6.5	<6.5	13.85	14.10	21.78	1.86	4.38	6.33	7.88	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/3/2005	813	45.85359	119.67266	13	9.28	<6.5	<6.5	13.86	14.12	21.48	1.45	4.90	6.58	7.98	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD2	11/3/2005	813	45.85359	119.67266	25	9.31	<6.5	<6.5	13.82	13.97	21.42	1.95	4.54	6.64	7.96	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD3	11/3/2005	820	45.85361	119.67239	1	9.39	<6.5	<6.5	13.89	14.10	21.78	1.27	4.38	6.33	7.89	<6.5 or >8.5	<6.5 or >8.5	
TF-WCD3	11/3/2005	820	45.85361	119.67239	13	9.36	<6.5	<6.5										

Table 1
Water Quality Field Parameters Monitoring Results Compared to Triggers—Transfer Facility
October 31 through November 6, 2005

Station ID	Date	Time	Latitude (dd) ¹	Longitude (dd)	Depth (ft)	DO (mg/L)	DO Triggers ²		Temp (deg C)	Temperature Triggers ²		Turbidity (NTU)	Turbidity Triggers ²		pH	pH Triggers ²	
							Event Specific Background	Pre- construction Background		Event Specific Background	Pre- construction Background		Event Specific Background	Pre- construction Background		Event Specific Background	Pre- construction Background
TF-WCD2	11/3/2005	1512	45.85359	119.67266	1	9.40	<6.5	<6.5	13.85	14.18	21.78	1.42	4.88	6.33	7.90	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/3/2005	1512	45.85359	119.67266	13	9.38	<6.5	<6.5	13.86	14.19	21.48	1.52	4.78	6.58	7.98	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/3/2005	1512	45.85359	119.67266	25.5	9.41	<6.5	<6.5	13.81	14.11	21.42	1.51	4.86	6.64	7.99	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/3/2005	1518	45.85361	119.67239	1	9.46	<6.5	<6.5	13.86	14.18	21.78	1.40	4.88	6.33	7.90	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/3/2005	1518	45.85361	119.67239	13.5	9.40	<6.5	<6.5	13.87	14.19	21.48	1.53	4.78	6.58	7.95	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/3/2005	1518	45.85361	119.67239	26	9.42	<6.5	<6.5	13.85	14.11	21.42	1.57	4.86	6.64	7.99	<6.5 or >8.5	<6.5 or >8.5
TF-WCU	11/4/2005	809	45.85347	119.67043	1	9.70	NA	NA	13.17	NA	NA	1.96	NA	NA	7.10	NA	NA
TF-WCU	11/4/2005	809	45.85347	119.67043	6	9.73	NA	NA	13.16	NA	NA	1.83	NA	NA	7.23	NA	NA
TF-WCU	11/4/2005	809	45.85347	119.67043	11	9.67	NA	NA	13.14	NA	NA	1.66	NA	NA	7.28	NA	NA
TF-WCD1	11/4/2005	745	45.85352	119.67284	1	9.65	<6.5	<6.5	13.34	13.47	21.78	2.25	4.96	6.33	7.37	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/4/2005	745	45.85352	119.67284	10.5	9.67	<6.5	<6.5	13.33	13.46	21.48	2.00	4.83	6.58	7.32	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/4/2005	745	45.85352	119.67284	20.5	9.67	<6.5	<6.5	13.33	13.44	21.42	1.58	4.66	6.64	7.34	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/4/2005	752	45.85359	119.67266	1	9.63	<6.5	<6.5	13.32	13.47	21.78	1.83	4.96	6.33	7.16	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/4/2005	752	45.85359	119.67266	13	9.65	<6.5	<6.5	13.37	13.46	21.48	2.49	4.83	6.58	7.26	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/4/2005	752	45.85359	119.67266	25	9.66	<6.5	<6.5	13.36	13.44	21.42	2.53	4.66	6.64	7.25	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/4/2005	800	45.85361	119.67239	1	9.53	<6.5	<6.5	13.33	13.47	21.78	2.13	4.96	6.33	7.08	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/4/2005	800	45.85361	119.67239	13.5	9.61	<6.5	<6.5	13.35	13.46	21.48	1.75	4.83	6.58	7.19	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/4/2005	800	45.85361	119.67239	26	9.65	<6.5	<6.5	13.34	13.44	21.42	1.76	4.66	6.64	7.20	<6.5 or >8.5	<6.5 or >8.5
TF-WCU	11/4/2005	1148	45.85347	119.67043	1	9.90	NA	NA	13.41	NA	NA	1.83	NA	NA	7.82	NA	NA
TF-WCU	11/4/2005	1148	45.85347	119.67043	6	9.81	NA	NA	13.37	NA	NA	1.29	NA	NA	7.87	NA	NA
TF-WCU	11/4/2005	1148	45.85347	119.67043	11	9.78	NA	NA	13.37	NA	NA	1.75	NA	NA	7.92	NA	NA
TF-WCD1	11/4/2005	1124	45.85352	119.67284	1	9.58	<6.5	<6.5	13.41	13.71	21.78	1.74	4.83	6.33	7.76	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/4/2005	1124	45.85352	119.67284	12	9.68	<6.5	<6.5	13.39	13.67	21.48	1.77	4.29	6.58	7.86	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/4/2005	1124	45.85352	119.67284	23	9.67	<6.5	<6.5	13.39	13.67	21.42	1.57	4.75	6.64	7.90	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/4/2005	1130	45.85359	119.67266	1	9.89	<6.5	<6.5	13.42	13.71	21.78	1.87	4.83	6.33	7.79	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/4/2005	1130	45.85359	119.67266	13	9.76	<6.5	<6.5	13.40	13.67	21.48	1.60	4.29	6.58	7.89	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/4/2005	1130	45.85359	119.67266	25	9.79	<6.5	<6.5	13.39	13.67	21.42	1.72	4.75	6.64	7.91	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/4/2005	1138	45.85361	119.67239	1	9.87	<6.5	<6.5	13.42	13.71	21.78	1.26	4.83	6.33	7.80	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/4/2005	1138	45.85361	119.67239	13.5	9.81	<6.5	<6.5	13.39	13.67	21.48	1.52	4.29	6.58	7.89	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/4/2005	1138	45.85361	119.67239	26	9.79	<6.5	<6.5	13.39	13.67	21.42	1.70	4.75	6.64	7.91	<6.5 or >8.5	<6.5 or >8.5

Notes: ¹Datum for coordinates is NAD 83.

²Trigger is exceeded where downstream conditions exceed the specified amounts relative to both the event-specific background and the pre-construction background survey (95% upper confidence limit on the mean for temperature and

³TF-WCU is the upstream event-specific background station.

BOLD indicates an exceedance

NC indicates that a parameter was not collected

APPENDIX A

TRANSFER FACILITY WQ MONITORING LOG SHEET



1423 3rd Ave., Suite 300
 Seattle, Washington 98101
 Phone 206.287.9130
 Fax 206.287.9131
www.anchorenv.com

Water Quality Monitoring Form			
Station ID: <u>TF-WCU</u>	Date: <u>10-2-05</u>		Time: <u>1155</u>
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>52°, thin overcast, wind <5 mph from north</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10, waiting for trucks</u>			
Depth to Bottom: <u>14 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.49</u>	<u>14.03</u>	<u>1.45</u>
Depth 2: <u>7 (m)ft.</u>	<u>9.45</u>	<u>14.04</u>	<u>1.64</u>
Depth 3: <u>13 (m)ft.</u>	<u>9.47</u>	<u>14.05</u>	<u>1.55</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.84</u>	2 <u>7.86</u>	3 <u>7.90</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hanguail</u>		



1423 3rd Ave., Suite 300
 Seattle, Washington 98101
 Phone 206.287.9130
 Fax 206.287.9131
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Water Quality Monitoring Form

Station ID: <u>TF-WCD-1</u>	Date: <u>11-2-05</u>	Time: <u>1130</u>
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Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>
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Coordinates Datum:

Lat/Northing:	Long/Easting:
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Weather/River Stage/Flow Observations:

52°, thin overcast, wind < 5 from north

Status/Description of Operation at Time of Sampling:

Waiting for trucks

Depth to Bottom: 15 (m) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.83</u>	<u>14.13</u>	<u>1.88</u>
Depth 2: <u>7.5 (m) ft.</u>	<u>9.37</u>	<u>14.11</u>	<u>1.34</u>
Depth 3: <u>14 (m) ft.</u>	<u>9.46</u>	<u>14.11</u>	<u>1.50</u>
Other:			

Evidence of floating or suspended materials: none

Evidence of oil/hydrocarbon sheen:
 (Thickness, contiguous?, size, rate of dissipation) none

Discoloration and Turbidity: none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.74 2 7.84 3 7.88

Recorded by: Craig Wells Other Monitoring Personnel: Steve Haquail



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-2</u>	Date: <u>11-2-05</u>	Time: <u>1138</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>52°, thin overcast, wind < 5 mph from north</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10, waiting for trucks</u>			
Depth to Bottom: <u>26 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.32</u>	<u>14.16</u>	<u>1.60</u>
Depth 2: <u>13 (m)ft.</u>	<u>9.30</u>	<u>14.12</u>	<u>1.75</u>
Depth 3: <u>25 (m)ft.</u>	<u>9.22</u>	<u>14.11</u>	<u>1.55</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.83</u>	2 <u>7.90</u>	3 <u>7.94</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-3</u>	Date: <u>11-2-05</u>	Time: <u>1146</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>52°, thin overcast, wind < 5 mph from north</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10, waiting for trucks</u>			
Depth to Bottom: <u>27 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.38</u>	<u>14.16</u>	<u>1.41</u>
Depth 2: <u>13.5 (m)ft.</u>	<u>9.30</u>	<u>14.12</u>	<u>1.37</u>
Depth 3: <u>26 (m)ft.</u>	<u>9.32</u>	<u>14.12</u>	<u>1.09</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.84</u>	2 <u>7.91</u>	3 <u>7.93</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCU</u>	Date: <u>11-2-05</u>	Time: <u>1558</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>53°, Thin overcast, calm, negligible current</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10, Waiting for trucks</u>			
Depth to Bottom: <u>11.5 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.20</u>	<u>14.19</u>	<u>1.85</u>
Depth 2: <u>5.5 (m)ft.</u>	<u>9.32</u>	<u>14.17</u>	<u>1.16</u>
Depth 3: <u>10.5 (m)ft.</u>	<u>9.26</u>	<u>14.18</u>	<u>1.36</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.84</u>	2 <u>9.87</u>	3 <u>7.92</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-1</u>	Date: <u>11-02-05</u>	Time: <u>1530</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>53°, thin overcast Calm. Reverse current? eddy?</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. waiting for trucks</u>			
Depth to Bottom: <u>18 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.17</u>	<u>14.17</u>	<u>1.88</u>
Depth 2: <u>9 (m)ft.</u>	<u>9.04</u>	<u>14.19</u>	<u>1.77</u>
Depth 3: <u>17 (m)ft.</u>	<u>9.19</u>	<u>14.20</u>	<u>1.39</u>
Other:			
Evidence of floating or suspended materials:	<u>None</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>None</u>		
Discoloration and Turbidity:	<u>None</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.84</u>	2 <u>7.90</u>	3 <u>7.91</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-2</u>	Date: <u>11-02-05</u>	Time: <u>1540</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>53°, Thin overcast, calm, Reverse current?</u> <u>eddy?</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading Barge B-10, waiting for trucks</u>			
Depth to Bottom: <u>23.5 (m) ft.</u>	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.18</u>	<u>14.17</u>	<u>1.61</u>
Depth 2: <u>12.5 (m) ft.</u>	<u>9.21</u>	<u>14.19</u>	<u>1.72</u>
Depth 3: <u>24.5 (m) ft.</u>	<u>9.19</u>	<u>14.20</u>	<u>1.51</u>
Other:			
Evidence of floating or suspended materials:		<u>Some aquatic veg.</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>none</u>	
Discoloration and Turbidity:		<u>none</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
<u>pH: 1 7.85 2 7.90 3 7.92</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargan</u>)		



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11-2-05 Time: 1547

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing:	Long/Easting:
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Weather/River Stage/Flow Observations:

53°, Thin overcast, calm. Negligible current

Status/Description of Operation at Time of Sampling:

Offloading ~~other~~ barge B-10. Waiting for truck

Depth to Bottom: 26.5 (m) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (m) ft.	<u>9.22</u>	<u>14.18</u>	<u>1.38</u>
Depth 2: <u>13</u> (m) ft.	<u>9.26</u>	<u>14.19</u>	<u>1.22</u>
Depth 3: <u>25.5</u> (m) ft.	<u>9.14</u>	<u>14.20</u>	<u>1.48</u>
Other:			

Evidence of floating or suspended materials:

Some aquatic veg.

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

None

Discoloration and Turbidity:

None

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.84 2 7.93 3 7.92

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harquist



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Water Quality Monitoring Form			
Station ID: <u>TF-WCU</u>	Date: <u>11-3-05</u>	Time: <u>0827</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>41°, overcast, wind < 5 mph from north</u>			
Status/Description of Operation at Time of Sampling: <u>offloading barge B-10, waiting for trucks</u>			
Depth to Bottom: <u>14.5 (m) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.34</u>	<u>13.80</u>	<u>1.38</u>
Depth 2: <u>7 (m) ft.</u>	<u>9.31</u>	<u>13.82</u>	<u>1.90</u>
Depth 3: <u>13.5 (m) ft.</u>	<u>9.30</u>	<u>13.67</u>	<u>1.54</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.89</u>	2 <u>7.90</u>	3 <u>7.97</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Harguail</u>		



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-1</u>	Date: <u>11-3-05</u>	Time: <u>0803</u>
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Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>
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Coordinates Datum:

Lat/Northing:	Long/Easting:
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Weather/River Stage/Flow Observations:

41°, overcast, wind < 5 mph From north

Status/Description of Operation at Time of Sampling:

offloading barge B-10. Waiting for trucks

Depth to Bottom: 14 (m)ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.31</u>	<u>13.80</u>	<u>1.68</u>
Depth 2: <u>7 (m)ft.</u>	<u>9.23</u>	<u>13.83</u>	<u>1.42</u>
Depth 3: <u>13 (m)ft.</u>	<u>9.27</u>	<u>13.83</u>	<u>1.58</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.73 2 7.85 3 7.91

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harguail



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-2</u>	Date: <u>11-3-05</u>	Time: <u>0813</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>41°, Overcast, Wind < 5 mph from north</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. Waiting for trucks</u>			
Depth to Bottom: <u>26 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.37</u>	<u>13.85</u>	<u>1.86</u>
Depth 2: <u>13 (m)ft.</u>	<u>9.28</u>	<u>13.86</u>	<u>1.45</u>
Depth 3: <u>25 (m)ft.</u>	<u>9.31</u>	<u>13.82</u>	<u>1.95</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.88</u>	2 <u>7.98</u>	3 <u>7.96</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-3</u>	Date: <u>11-3-05</u>	Time: <u>0820</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>41°, overcast, wind < 5 mph from north</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. Waiting for trucks</u>			
Depth to Bottom: <u>26.5 (m) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.39</u>	<u>13.89</u>	<u>1.27</u>
Depth 2: <u>13 (m) ft.</u>	<u>9.36</u>	<u>13.83</u>	<u>1.44</u>
Depth 3: <u>25.5 (m) ft.</u>	<u>9.34</u>	<u>13.82</u>	<u>1.59</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.89</u>	2 <u>7.98</u>	3 <u>7.98</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WC4</u>	Date: <u>11-3-05</u>	Time: <u>1211</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	*
Weather/River Stage/Flow Observations: <u>48°, light rain, wind 5-8 mph from north</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. Second round of trucks completed</u>			
Depth to Bottom: <u>14.5 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.25</u>	<u>13.78</u>	<u>1.40</u>
Depth 2: <u>7 (m)ft.</u>	<u>9.35</u>	<u>13.72</u>	<u>1.14</u>
Depth 3: <u>13.5 (m)ft.</u>	<u>9.33</u>	<u>13.53</u>	<u>1.26</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.86</u> 2 <u>7.90</u> 3 <u>7.94</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Harganai</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-1</u>	Date: <u>11-3-05</u> Time: <u>1149</u>		
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>48°, light rain, 5-8 mph wind from north</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10, second round of trucks completed</u>			
Depth to Bottom: <u>11.5 (m) ft.</u>	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.31</u>	<u>13.88</u>	<u>1.98</u>
Depth 2: <u>5.5 (m) ft.</u>	<u>9.29</u>	<u>13.89</u>	<u>1.54</u>
Depth 3: <u>10.5 (m) ft.</u>	<u>9.26</u>	<u>13.89</u>	<u>1.30</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.87</u> 2 <u>7.90</u> 3 <u>7.94</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-2 Date: 11-3-03 Time: 1158

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing:		Long/Easting:
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Weather/River Stage/Flow Observations:

48°, light rain, wind 5-8 mph from north

Status/Description of Operation at Time of Sampling:

Offloading barge B-10, second round of trucks completed

Depth to Bottom: 25 (m)ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.26</u>	<u>13.87</u>	<u>1.53</u>
Depth 2: <u>12.5 (m)ft.</u>	<u>9.30</u>	<u>13.88</u>	<u>1.32</u>
Depth 3: <u>24 (m)ft.</u>	<u>9.33</u>	<u>13.88</u>	<u>1.40</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.89 2 8.00 3 8.00

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harganil



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-3</u>	Date: <u>11-3-05</u>	Time: <u>1203</u>
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Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>
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Coordinates Datum:

Lat/Northing:	Long/Easting:
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Weather/River Stage/Flow Observations:

48°, light rain, wind 5-8 mph from north

Status/Description of Operation at Time of Sampling:

Offloading barge B-10, Second round of trucks completed

Depth to Bottom: 26 (m) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.32</u>	<u>13.89</u>	<u>1.39</u>
Depth 2: <u>13 (m) ft.</u>	<u>9.30</u>	<u>13.87</u>	<u>1.39</u>
Depth 3: <u>25 (m) ft.</u>	<u>9.29</u>	<u>13.87</u>	<u>1.20</u>

Other:

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.88 2 7.99 3 8.00

Recorded by:

Craig Wells

Other Monitoring Personnel: Steve Harquail



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Water Quality Monitoring Form

Station ID: TF-WCU	Date: 11-3-05	Time: 1527
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Project Name: Gasco	Project Number: 000029-02
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Coordinates Datum:

Lat/Northing:	Long/Easting:
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Weather/River Stage/Flow Observations:

52°, light rain, wind 5-8 mph from south

Status/Description of Operation at Time of Sampling:

offloading barge B-10. Completed third round of trucks

Depth to Bottom: 12 (~~m~~)ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (m)ft.	<u>9.32</u>	<u>13.88</u>	<u>1.88</u>
Depth 2: <u>6</u> (m)ft.	<u>9.38</u>	<u>13.89</u>	<u>1.78</u>
Depth 3: <u>11</u> (m)ft.	<u>9.42</u>	<u>13.81</u>	<u>1.86</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.88 2 7.92 3 7.98

Recorded by: *Craig Wells*

Other Monitoring Personnel: *Steve Harquail*



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-1</u>	Date: <u>11-3-05</u>	Time: <u>1503</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>53°, light rain, wind 5-8 mph from south</u>			
Status/Description of Operation at Time of Sampling: <u>Tug operation ~100 ft. away (In prop wash) Offloading barge B-10. Completed third round of trucks</u>			
Depth to Bottom: <u>25.5 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.42</u>	<u>13.84</u>	<u>1.73</u>
Depth 2: <u>12.5 (m)ft.</u>	<u>9.39</u>	<u>13.85</u>	<u>1.31</u>
Depth 3: <u>24.5 (m)ft.</u>	<u>9.36</u>	<u>13.80</u>	<u>1.46</u>
Other:			
Evidence of floating or suspended materials:		<u>none</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>none</u>	
Discoloration and Turbidity:		<u>none</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.90</u>	2 <u>7.97</u>	3 <u>7.98</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-2</u>	Date: <u>11-3-05</u>	Time: <u>1512</u>
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Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>
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Coordinates Datum:

Lat/Northing:		Long/Easting:
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Weather/River Stage/Flow Observations:

53°, light rain, wind 5-8 mph from south

Status/Description of Operation at Time of Sampling: Tug operating w/50 Ft away (In progress)
offloading barge B-10. Completed Third round of trucks

Depth to Bottom: 26.5 (m) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.40</u>	<u>13.83</u>	<u>1.42</u>
Depth 2: <u>13 (m) ft.</u>	<u>9.38</u>	<u>13.86</u>	<u>1.52</u>
Depth 3: <u>25.5 (m) ft.</u>	<u>9.41</u>	<u>13.81</u>	<u>1.51</u>
Other:			

Evidence of floating or suspended materials:

Evidence of oil/hydrocarbon sheen:
 (Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.90 2 7.98 3 7.99

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harquail



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-3</u>	Date: <u>11-3-05</u>	Time: <u>18 18</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>52°, Light rain, wind 5-8 mph from south</u>			
Status/Description of Operation at Time of Sampling: <u>Tug operating ~200 ft away (In prop wash) Offloading barge B-10. Completed third round of trucks</u>			
Depth to Bottom: <u>27 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.46</u>	<u>13.86</u>	<u>1.40</u>
Depth 2: <u>13.5 (m)ft.</u>	<u>9.40</u>	<u>13.87</u>	<u>1.53</u>
Depth 3: <u>26 (m)ft.</u>	<u>9.42</u>	<u>13.85</u>	<u>1.57</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.90</u>	2 <u>7.95</u>	3 <u>7.99</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCU</u>	Date: <u>11-4-05</u>	Time: <u>0809</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>44°, scattered clouds, wind <5 mph from south</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. First round of trucks completed</u>			
Depth to Bottom: <u>12 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.70</u>	<u>13.17</u>	<u>1.96</u>
Depth 2: <u>6 (m)ft.</u>	<u>9.73</u>	<u>13.16</u>	<u>1.83</u>
Depth 3: <u>11 (m)ft.</u>	<u>9.67</u>	<u>13.14</u>	<u>1.66</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:	* <u>7.10</u> 2 <u>7.23</u> 3 <u>7.28</u> pH: 1 <u>7.10</u> 2 <u>7.23</u> 3 <u>7.28</u> * pH values appeared anomalous. Meter was recalibrated following the monitoring event		
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-1</u>	Date: <u>11-4-05</u>	Time: <u>0745</u>
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>	
Coordinates Datum:		
Lat/Northing:		Long/Easting:

Weather/River Stage/Flow Observations:

44°, scattered clouds, wind < 5 mph from south

Status/Description of Operation at Time of Sampling:

Offloading barge B-10, waiting for trucks (First round completed)

Depth to Bottom: 21.5 (m)ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.65</u>	<u>13.34</u>	<u>2.25</u>
Depth 2: <u>10.5 (m)ft.</u>	<u>9.67</u>	<u>13.33</u>	<u>2.00</u>
Depth 3: <u>20.5 (m)ft.</u>	<u>9.67</u>	<u>13.33</u>	<u>1.58</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 * 7.37 2 7.32 3 * 7.34

* pH values appeared anomalous. Meter was recalibrated following monitoring event.

Recorded by:

Craig Wells

Other Monitoring Personnel:

Steve Hargan)



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-2</u>	Date: <u>11-4-05</u>	Time: <u>0752</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>44°, scattered clouds, wind <5 mph from south</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. Completed first round of trucks</u>			
Depth to Bottom: <u>26 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.63</u>	<u>13.32</u>	<u>1.83</u>
Depth 2: <u>13 (m)ft.</u>	<u>9.65</u>	<u>13.37</u>	<u>2.49</u>
Depth 3: <u>25 (m)ft.</u>	<u>9.66</u>	<u>13.36</u>	<u>2.53</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments: *			
pH: 1 <u>7.16</u>	2 <u>*7.26</u>	3 <u>*7.25</u>	
* pH values appeared anomalous. Meter was recalibrated following monitoring event.			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-3	Date: 11-4-05	Time: 0800
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Project Name: Gasco	Project Number: 000029-02
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Coordinates Datum:

Lat/Northing:		Long/Easting:
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Weather/River Stage/Flow Observations:

45°, scattered clouds, wind <5 mph from south

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. First round of trucks completed.

Depth to Bottom: **27 (m) ft.**

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: 1 (m) ft.	9.53	13.33	2.13
Depth 2: 13.5 (m) ft.	9.61	13.35	1.75
Depth 3: 26 (m) ft.	9.65	13.34	1.76
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: **1 * 7.08 2 * 7.19 3 * 7.20**

* pH values appeared anomalous. Meter was recalibrated following monitoring event.

Recorded by:

Craig Wells

Other Monitoring Personnel: **Steve Hargrave**



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Water Quality Monitoring Form

Station ID: <u>TF-WCU</u>	Date: <u>11-4-05</u>	Time: <u>1148</u>
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Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>
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Coordinates Datum:

Lat/Northing:	Long/Easting:
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Weather/River Stage/Flow Observations:

54°, partly cloudy, wind 5-8 mph from west

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. Completed second (last) round of trucks

Depth to Bottom: 12 (m)ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.90</u>	<u>13.41</u>	<u>1.83</u>
Depth 2: <u>6 (m)ft.</u>	<u>9.81</u>	<u>13.37</u>	<u>1.29</u>
Depth 3: <u>11 (m)ft.</u>	<u>9.78</u>	<u>13.37</u>	<u>1.75</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.82 2 7.87 3 7.92

Recorded by:

Craig Wells

Other Monitoring Personnel: Steve Harganill



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-1</u>	Date: <u>11-4-05</u>	Time: <u>1124</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>54°, partly cloudy, wind 5-8 mph from southwest</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. Completed second (last) round of tanks</u>			
Depth to Bottom: <u>24 (m) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.58</u>	<u>13.41</u>	<u>1.74</u>
Depth 2: <u>12 (m) ft.</u>	<u>9.68</u>	<u>13.39</u>	<u>1.77</u>
Depth 3: <u>23 (m) ft.</u>	<u>9.67</u>	<u>13.39</u>	<u>1.57</u>
Other:			
Evidence of floating or suspended materials:		<u>none</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>none</u>	
Discoloration and Turbidity:		<u>none</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.76</u>	2 <u>7.86</u>	3 <u>7.90</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-2

Date: 11-04-05 Time: 1130

Project Name: Gasco

Project Number: 000029-02

Coordinates Datum:

Lat/Northing:

Long/Easting:

Weather/River Stage/Flow Observations:

54°, partly cloudy, wind 5-8 mph from southwest

Status/Description of Operation at Time of Sampling:

Offloading barge B-10, Completed second (last) round of trucks)

Depth to Bottom: 26 (m) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (<u>m</u>) ft.	<u>9.89</u>	<u>13.42</u>	<u>1.87</u>
Depth 2: <u>13</u> (<u>m</u>) ft.	<u>9.76</u>	<u>13.40</u>	<u>1.60</u>
Depth 3: <u>25</u> (<u>m</u>) ft.	<u>9.79</u>	<u>13.39</u>	<u>1.72</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.79 2 7.89 3 7.91

Recorded by:

Craig Wells

Other Monitoring Personnel:

Steve Harquist



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-3</u>	Date: <u>10-04-05</u>	Time: <u>1138</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>54°, partly cloudy, wind 5-8 mph from Southwest</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. Completed second (last) round of trucks.</u>			
Depth to Bottom: <u>27 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.87</u>	<u>13.42</u>	<u>1.26</u>
Depth 2: <u>13.5 (m)ft.</u>	<u>9.81</u>	<u>13.39</u>	<u>1.52</u>
Depth 3: <u>26 (m)ft.</u>	<u>9.79</u>	<u>13.39</u>	<u>1.70</u>
Other:			
Evidence of floating or suspended materials: <u>none</u>			
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation) <u>none</u>			
Discoloration and Turbidity: <u>none</u>			
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments: pH: 1 <u>7.80</u> 2 <u>7.89</u> 3 <u>7.91</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Harquist</u>		